17389

TENNESSEE DEPARTMENT OF PUBLIC HEALTH

OFFICE CORRESPONDENCE

17 7 0118

FROM	TO	DATE
RAW	WHM	

EXHIBIT 440

DATE: August 7, 1969

TO: W. H. M.

FROM: R. A.W.

SUBJECT: Spring on Farm near Radnor Yards.

On Tuesday, July 15 a visit was made to the spring on the property of Grassmere and Croft which has been willed to the Children's Museum. This investigation was a follow-up to a previous visit made in June, 1968. Conditions have not changed appreciably since that time. Conditions at that time are described in a memo dated June 19, 1968, to WHM from HNM and RAW.

This visit, however, included an examination of 2 additional springs which flow into this stream. The first of these springs is located approximately 1/2 mile downstream from the spring house. This spring came out of limestone and flowed about 20 - 30 feet to the creek. Typical spring life was observed here: Crayfish, pleurocerid snails, amphipods, isopods, immature salamanders and green algae were common. This condition was not found at the point at which it entered the stream.

The second spring observed is located about 300 yards from the above spring. This spring flowed 75 - 100 feet to the creek. Here planaria, isopods, physid snails and amphipods were abundant with salamanders, crayfish, midge larvae and pleurocerid snails being common. Again no organisms were found after it entered the creek.

Another small stream coming from beneath the railroad joins the spring near Nolensville Road. This stream is slightly larger and apparently has siltation problems. However, examination of this stream approximately 10 - 12 feet from confluence with the spring stream showed green and red midge larvae, physid snails, isopods, amphipods and planaria to be common. The spring stream about 10 - 12 feet from this confluence still showed petroleum skim and no sign of life.

One additional point was checked approximately 25 yards downstream from the confluence of these two streams. This area still showed petroleum skim, though more slightly. One planaria and one amphipod were the only organisms observed. Just below this point the creek flows underground through a large pipe which goes under business parking lots and Nolensville Road. It leaves the pipe near Paragon Mills Road and eventually enters Seven-Mile Creek. No observations have been made in this area.

17 7 0119

TENNESSEE DEPARTMENT OF PUBLIC HEALTH

OFFICE CORRESPONDENCE

FROM	TO	DATE

DATE:

TO:

FROM:

SUBJECT:

Samples of the red flock and black sediment were taken from the area of the spring above the spring house. It was found to be a chemical flock high in iron (by a qualitative test). It was also found that if the black sediment was allowed to set overnight in a beaker it would oxidize to the red flock. Further observations show that if left in a sealed jar it will reduce back to the black sediment state.

Whereas there were no forms of animal life observed in the spring stream, there was a limited amount of algae at a few points. There was a blue-green algae found first about 200 yards below the bridge below the spring house. A form of green-algae was found at a point about 50 yards below the second additional spring's confluence with the spring creek.

After examination of the additional springs and creek, it can be said without doubt that this spring and stream has been seriously damaged by the seepage of L & N's wastewater. The conditions now existing still indicate toxic effects by the absence of biota such as that found in these additional springs.

R. A. W.

RAW:pam